United States Department of Agriculture | Forest Service | Southwestern Region Forest Health Arizona Zone Office | 2500 S. Pine Knoll Drive Flagstaff, AZ 86001-6381 FAX (928) 556-2130 Voice (928) 556-2073

File Code: 3420 **Date:** August 14, 2003
Route To:

Subject: Spruce Beetle Activity, Pinaleno Mts., Safford RD, Coronado NF (saffordrd)

To: District Ranger, Safford RD

On July 23, 2003, Lisa Angle and David Vega, both of the Safford RD, and I evaluated bark beetle activity within the recreation, administrative, and summer home sites on the Pinaleño Mountains. This is a summary of the survey results and observations regarding bark beetle activity in these areas. Also included is a summary of past treatments, a description of the current situation, and a discussion of possible future actions.

Background. Spruce beetle populations have been increasing over the past several years on the Pinaleño Mountains following spruce defoliation and snow-caused damage that occurred in the mid 1990s. Spruce beetle activity was observed in and adjacent to several recreation, administrative, and summer home sites in 2000. An integrated pest management approach was adopted; and in 2001and 2002, approximately 318 beetle-infested spruce were removed from these sites (see Table 1). In addition, stumps from infested trees were burned to kill spruce beetle that would otherwise emerge and attack adjacent green spruce.

Table 1. Infested spruce removed in 2001 and 2002, and detected during this site visit.

Recreation site	# of Infested Spruce Removed		# of New Infested Spruce
	2001	2002	2003
Shannon C.G.	56	12	27
Hospital Flat C.G.	93	6	20
Solider Creek C.G.	37	48	39
Old Columbine Admin. Site	8	2	5
Columbine Summer Homes	50	6	23
TOTAL	**244**	**74**	**114**

Current Situation. During this site visit, a 100 percent survey of spruce within and adjacent to the above-mentioned sites was completed. Approximately 2,500 spruce were examined for signs of beetle attack. There was an increase in beetle-related spruce mortality this year (see Table 1).

Future Action. Past treatments have been effective at minimizing beetle related impacts within the sites of concern; however, adjacent beetle populations continue to move into the treatment areas. Continued sanitation efforts are needed to further minimize additional tree losses. The 114 infested spruce identified during this site visit should be felled and removed from the sites by this fall, if possible.

In keeping with an integrated pest management approach and because of the continued beetle pressure from surrounding areas, I would recommend deployment of an anti-aggregation pheromone for spruce beetle. The anti-aggregation pheromone (3-methylcyclohex-2-en-1-one [MCH]) serves to disrupt aggregation behavior of beetles. The material comes in a bubble capsule that can be stapled to trees. The capsules would be deployed before beetle flight on a grid within the sites. MCH is being used at the Snowbowl ski resort on the Coconino NF with positive results. Also, the Apache-Sitgreaves NFs is using MCH to protect PAC sites following the Rodeo-Chediski fire.

Funding may be available from Forest Health Protection to continue to minimize impacts from the spruce beetle at these sites. Requests for these funds should be submitted to the Regional Office no later than October 18, 2003. MCH is considered a pesticide, and, if used, will need all the appropriate documentation. If you have any questions regarding this assessment, please let us know.

/s/ John Anhold
JOHN ANHOLD
Arizona Zone Leader
Forest Health

cc: Randall A Smith, Robert Lefevre, Joel McMillin, Debra Allen-Reid, Leonard Lucero, Lisa Angle, Mailroom R3 Coronado